Form PTO-1449

INFORMATION DISCLOSURE CITATION IN AN APPLICATION

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Docket Number (Optional): SUV-003.04(20017-304)

Application Number: 08/916,140

Applicant: Scott, Matthew P. et al.

Filing Date: August 21, 1997

Group Art Unit: 1632

U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE

FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	Translation YES	Translation NO

OTHER DOCUMENTS *(Including Author, Title, Date, Pertinent Pages, Etc.)*

RS	AA ✓	Burke, R., and Basler K.,"Hedgehog signaling in Drosophila eye and limb development-conserved machinery, divergent roles?", Curr. Opin. Neurobiol., 7(1): 55-61 (1997).
	AB ✓	Buscher, D. et al., "Evidence for Genetic Control of Sonic Hedgehog by Gli3 in Mouse Limb Development", Mech. Dev., 62 (2):175-182 (1997).
	AC ✓	Forbes et al., "Genetic analysis of hedgehog signalling in the Drosophila embryo", Development 1993 Supplement pp. 115- 124 (1993).
	AD ✓	Hidalgo Alicia, "Interaction between segment polarity genes and the generation of the segmental pattern in *Drosophila*", *Mechanisms of Development 35 :77-87 (1991).*
	AE ✓	Hidalgo Alicia, "Three distinct roles for the engrailed gene in Drosophila wing development", Current Biology 4(12) : 1087-1098 (1994).
	AF ✓	Platt A. K. et al., "Expression of the mouse Gli and Ptc genes is adjacent to embryonic sources of hedgehog signals suggesting a conservation of pathways between flies and mice", Mechanisms of Development 62:121-135 (1997).
	AG ✓	Sampedro J. and Guerrero I., " Unrestricted expression of the Drosophila gene patched allows a normal segment polarity", Nature 353 : 187-190 (12 Sept. 1991).
	AH ✓	Sánchez- Herrero et al., "The *fu* gene discriminaes between pathways to control *dpp* expression in Drosophila imaginal discs", Mechanisms of Development 55: 159- 170 (1996).
	AI ✓	Scott P. Matthew, " Hox genes Arms and the Man", Nature Genetics 15: 117-118 (February 1997).
	AJ ✓	Strutt I. David and Mlodzik Marek, " The regulation of hedgehog and decapentaplegic during Drosophila eye imaginal disc development", Mechanisms of Development 58: 39- 50 (1996).
	AK ✓	Taylor et al., " Contrasting distributions of patched and hedgehog proteins in the *Drosophila* embryo", Mechanisms of Development 42:89- 96 (1993).
RS	AL ✓	Weed et al., " The Role of Sonic Hedgehog in Vertebrate Development", Matrix Biology 16 : 53- 58 (1997).

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DATE CONSIDERED: 12/4/00

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LIST OF PUBLICATIONS CITED BY APPLICANT (Use several sheets if necessary)		SUV-003.04	08/916,140
		APPLICANT: Matthew P. Scott et al.	
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	AH							
	AI							

OTHERS (including Author, Title, Date, Pertinent Pages, Etc.)

RS	AJ ✓	Gailani, M. and Bale, A., "Developmental genes and cancer: role of patched in basal cell carcinoma of the skin", *J. Natl. Cancer Inst.*, 89 (15): 1103-1109 (1997)
	AK ✓	Sisson, J. et al., "Costal2, a novel kinesin-related protein in the Hedgehog signaling pathway", *Cell*, 90 (2): 235-245 (1997)
	AL ✓	Vorechovsky, I. et al, "Somatic mutations in the human homologue of Drosophila patched in primitive neuroectodermal tumors", *Oncogene*, 15 (3): 361-366 (1997)
	AM ✓	Loftus, S., et al., "Murine model of Niemann-Pick C disease: mutation in a cholesterol homeostatis gene", *Science*, 277 (5323): 232-235 (1997)
	AN ✓	Struhl, G. et al., "Hedgehog acts by distinct gradient and signal relay mechanisms to organize cell type and cell polarity in the Drosophila abdomen", *Development*, 124 (11): 2155-2165 (1997)
	AO ✓	Bale, A., "Variable expressivity of patched mutations in flies and humans", *Am. J. Human Genet.*, 60 (1): 10-12 (1997)
	AP ✓	Chen, E. and Baker, B., "Compartmental organization of the Drosophila genital imaginal disks", *Development*, 124 (1): 205-218 (1997)
RS	AQ ✓	Jensen, A. and Wallace, V., "Expression of Sonic hedgehog and its putative role as a precursor cell mitogen in the developing mouse retina", *Development*, 124 (2): 363-371 (1997)

Examiner: R. Dale Kyle — Date Considered: 9/6/99

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RS	AR ✓	Hepker, J. et al., "Drosophila cubitus interruptus forms a negative feedback loop with patched and regulates expression of Hedgehog target genes", *Development*, 124 (2): 549-558 (1997)
	AS ✓	Nakamura, T. et al., "Induction of osteogenic differentiation by hedgehog proteins", *Biochem. Biophys. Res. Comm.*, 237 (2): 465-469 (1997)
	AT ✓	Grindley, J. et al., "Evidence for the involvement of the Gli gene family in embryonic mouse lung development", *Dev. Biol.*, 188 (2): 337-348 (1997)
	AU ✓	Alcedo, J. And Noll, M., "Hedgehog and its patched-smoothened receptor complex: a novel signalling mechanism at the cell surface", *Biol. Chem.*, 378 (7): 583-590 (1997)
	AV ✓	Hynes, M. et al., "Control of cell pattern in the neural tube by zinc finger transcription factor and oncogene *Gli*-1", *Neuron*, 19 (1): 15-26 (1997)
	AW ✓	Takabatae, T. et al., "Hedgehog and patched gene expression in adult ocular tissues", *FEBS Letters*, 410 (2-3): 485-489 (1997)
	AX ✓	Akiyama, H. et al., "Cloning of a mouse smoothened cDNA and expression patterns of hedgehog signaling molecules during chondrogenesis and cartilege differentiation in conal mouse EC cells, ATDC5", *Biophys. Res. Comm.*, 235 (1): 142-147 (1997)
	AY ✓	Oro, A .et al., "Basal cell carcinomas in mice overexressing sonic hedgehog", *Science*, 276(5313): 817-821 (1997)
	AZ ✓	Bhat, K. and Schedl, P., "Requirement for engrailed and invected genes reveals novel regulatory interactions between engrailed/invected, patched, gooseberry and wingless during Drosophila neurogenesis", *Development*, 124 (9): 1675-1688 (1997)
	BA ✓	Akimaru, H. et al., "Drosophila CBP is a co-activator of cubitus interruptus in hedgehog signalling", *Nature*, 386 (6626): 735-738 (1997)
	BB ✓	Epps, J. et al., "*Oroshigane*, a new segment polarity gene of Drosophila melanogaster, functions in hedgehog signal transduction", *Genetics*, 145 (4): 1041-1052 (1997)
	BC ✓	Von Ohlen, T. et al., "Hedgehog signaling regulates transcription through cubitus interruptus, a sequence-specific DNA binding protein", *Proc. Natl. Acad. Sci. USA*, 94 (6): 2404-2409 (1997)
	BD ✓	Rogers, G. et al., "Patched gene mutation screening in patientts with basal cell nevus syndrome using bi-directional dideoxy fingerprinting", *J. Invest. Dermatol. Abstracts*, 108(4): 598, # 364, (1997)
	BE ✓	Bellusci, S. et al., "Involvement of Sonic hedgehog (Shh) in mouse embryonic lung growth and morphogenesis", *Development*, 124 (1): 53-63 (1997)
	BF ✓	Stone, D. et al., "The tumor-suppressor gene patched encodes a candidate receptor for Sonic hedgehog", *Nature*, 384 (6605): 129-134 (1996)
	BG ✓	Marigo, V. et al., "Biochemical evidence that patched is the Hedgehog receptor", Nature, *Nature*, 384 (6605):176-179 (1996)
	BH ✓	Chen, Y. and Struhl, G. "Dual roles for patched in sequestering and transducing Hedgehog", *Cell*, 87 (3): 553-563 (1996)
	BI ✓	Forbes, A. et al, "The role of segment polarity genes during early oogenis in Drosophila", *Development*, 122 (10): 33283-3294 (1996)
	BJ ✓	Marigo, V. and Tabin, C., "Regulation of patched by sonic hedgehog in the developing neural tube", *Proc. Natl. Acad. Sci. USA*, 93 (18): 9346-9351 (1996)
	BK ✓	Epstein, D. et al., "Antagonizing cAMP-dependent protein kinase A in the dorsal CNS activates a conserved Sonic hedgehog signaling pathway", *Development*, 122 (9): 2885-2894 (1996)
RS	BL ✓	Alexandre, C. et al., "Transcriptional activation of hedgehog target genes in Drosophila is mediated directly by the cubitus intrerrptus protein, a member of the GLI family of zinc finger DNA-binding proteins", *Genes Dev.*, 10 (16): 2003-2013 (1996)

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RS	BM	Vortkamp, A. et al., "Regulation of rate of cartilage differentiation by Indian hedgehog and PTH-related protein", *Science*, 273 (5275): 613-622 (1996)
	BN	Goodrich, L. et al., "Conservation of the hedgehog/patched signaling pathway from flies to mice: induction of a mouse patched gene by Hedgehog", *Genes Dev.*, 10 (3): 301-312 (1996)
	BO	Marigo, V. et al., "Sonic hedgehog differentially regulates expression of GLI and GLI3 during limb development", *Dev. Biol.*, 180 (1): 273 -283 (1996)
	BP	Roush, W., "Hedgehog's patterning call is patched through, smoothly", *Science*, 274 (5291): 1304-1305 (1996)
	BQ	Gomez-Skarmeta, J. and Modolell, J., "Araucuan and caupolican provide a link between compartment subdivisions and patterning of sensory organs and veins in the Drosophila wing", *Genes Dev.*, 10 (22): 2935-1945 (1996)
	BR	Nusse, R. "Patching up Hedgehog", *Nature*, 384 (6605): 119-120 (1996)
	BS	Concordet, J. et al., "Spatial regulation of a zebrafish patched homoloogue reflects the roles of sonic hedgehog and protein kinase A in neural tube and somite patterning", *Development*, 122 (9): 2835-2846 (1996)
	BT	Gailani, M. et al., "The role of the human homologue of Drosophila patched in sporadic basal cell carcinomas", *Nat. Genet.*, 14 (1): 78-81 (1996)
	BU	Perrimon, N., "Serpentine proteins lither into the wingless and hedgehog fields", *Cell*, 86 (4):513-516(1996)
	BV	Alcedo, J. et al., "The Drosophila smoothened gene encodes a seven-pass membrane protein, a putative receptor for the hedgehog signal", *Cell*, 86 (2): 221-232 (1996)
	BW	Shilo, B., "Tumor suppressors. Dispatches from patched", *Nature*, 382 (6587): 115-116 (1996)
	BX	Pennisi, E., "Gene linked to commonest cancer", *Science*, 272 (5268): 1583-1584 (1996)
	BY	Dominguez, M. et al., "Sending and receiving the hedgehog signal: control by the Droosophila Gli protein cubitus interruptus", *Science*, 272 (5268): 1621-1625 (1996)
	BZ	Johnson, R. et al., "Human homolog of patched, a candidate gene for the basal cell nevus syndrome", *Science*, 272 (5268): 1668-1671 (1996)
	CA	Hahn, H. et al., "A mammalian patched homolog is expressed in target tissues of sonic hedgehog and maps to a region associated with development abnormalities", *J. Biol. Chem.*, 271 (21): 12125-12128 (1996)
	CB	Bokor, P. and DiNardo, S., "The roles of hedgehog, wingless and lines in patterning the dorsal epidermis in Drosophila", *Development*, 122 (4): 1083-1092 (1996)
	CC	Marigo, V. et al., "Conservation in hedgehog signaling: induction of a chicken patched homolog by Sonic hedgehog in the developing limb", *Development*, 122 (4): 1225-1233 (1996)
	CD	Bitgood, M. et al., "Sertoli cell signaling by Desert hedgehog regulates the male germline", *Curr. Biol.*, 6 (3): 298-304 (1996)
	CE	Chanut, F. and Heberlein, U., "Role of the morphogenetic furrow in establishing polarity in the Drosophila eye", *Development*, 121 (12): 4085-1094 (1995)
	CF	Johnson, R. et al., "Patched overexpression alters wing disc size and pattern: transcriptional and post-transcriptional effects on hedgehog targets", *Development*, 121 (12): 4161-4170 (1995)
	CG	Strutt, D. and Mlodzik, M. "Ommatidial polarity in the Drosophila eye is determined by the direction of furrow progression and local interactions", *Development*, 121 (12): 4247-4256 (1995)
	CH	Ma, C. and Moses, K., "Wingless and patched are negative regulators of the morphogenetic furrow and can effect tissue polarity in the developing Drosophila compound eye", *Development*, 121 (8): 2279-2289 (1995)
	CI	Kalderon, D., "Morphogenetic signalling. Responses to hedgehog", *Curr. Biol.*, 5 (6): 2279-2289 (1995)
RS	CJ	Ingham, P. and Fietz, M., "Quantitative effects of hedgehog and decapentaplegic activity on the patterning of the Drosophila wing", *Curr. Biol.*, 5 (4): 432-440 (1995)

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PS	CK ✓	Jiang, J. and Struhl, G., "Protein kinase A and hedgehog signaling in Drosophila limb development", *Cell*, 80 (4): 563-572 (1995)
	CL ✓	Strutt, D. et al., "Regulation of furrow progression in the Drosophila eye by cAMP-dependent protein kinase A", *Nature*, 373 (6516): 705-709 (1995)
	CM ✓	Habuchi, et al., "Detailed deletion mapping of chromosome 9q bladder cancer: evidence or two tumour suppressor loci ", *Oncogene*, 11: 1671-1674 (1995)
	CN ✓	Li, W., et al., "Function of protein kinase A in hedgehog signal transduction and Drosophila imaginal disc development", *Cell*, 80 (4): 553-562 (1995)
	CO ✓	Lepage, T. et al., "Signal transduction by cAMP-dependent protein kinase A in Drosophila limb patterning", *Nature*, 373 (6516): 711-715 (1995)
	CP ✓	Sanicola, M. et al., "Drawing a stripe in Drosophila imaginal disks: negative regulation of decapentaplagic and patched expression by engrailed", Genetics, 139 (2): 745-756 (1995)
	CQ ✓	Schuske, K. et al., "Patched overexpression causes loss of wingless expression in Drosophila embryos", *Dev. Biol.*, 164 (1): 300-301 (1994)
	CR ✓	Cadigan, K. et al., "Localized expression of sloppy paired protein maintains the polarity of Drosophila parasegments", *Genes Dev.*, 8 (8): 899-913 (1994)
	CS ✓	Kojima, T. et al., "Induction of a mirror-image duplication of anterior wing structures by localized hedgehog expression in the anterior compartment of Drosophila melanogaster wing imaginal discs", *Gene*, 148 (2): 211-7 (1994)
	CT ✓	Quinn, A. et al., "Delineation of two distinct deleted regions on chromosome 9 in human non-melanoma skin cancers", *Genes, Chromosomes & Cancers*, 11:222-225 (1994)
	CU ✓	Wicking, C. et al., "Fine genetic mapping of the gene for nevoid basal cell carcinoma syndrome", *Genomics*, 22: 505-511 (1994)
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	CW ✓	Heemskerk, J. and DiNardo, S., "Drosophila hedgehog acts as a morphogen in cellular patterning", *Cell*, 76: 449-460 (1994)
	CX ✓	Tabata, T. and Kornberg, T., "Hedgehog is a signaling protein with a key role in patterning Drosophila imaginal discs", *Cell*, 76: 89-102 (1994)
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	CZ ✓	Ma, C. et al., "The segment polarity gene hedgehog is required for progression of the morphogenic furrow in the developing Drosophila eye", *Cell*, 75 (5): 927-938 (1993)
	DA ✓	Echelard, Y. et al., "Sonic hedgehog, a member f a family of putative signaling molecules, is implicated in the regulation of CNS polarity", *Cell*, 75: 1417-1430 (1993)
	DB ✓	Riddle, R. et al., "Sonic hedgehog mediates the polarizing activity of the ZPA", *Cell*, 75: 1401-1416 (1993)
	DC ✓	Krauss, S. et al, "A functionally conserved homolog of the Drosophila segment polarity gene *hh* is expressed in tissues with polarizing activity in zebrafish embryos", *Cell*, 75: 1431-1444 (1993)
	DD ✓	Tabata, T. et al., "The Drosophila hedgehog gene is expressed specifically in posterior compartment cells and is a target of engrailed regulation", *Genes Dev.*, 6(12B): 2635-2645 (1992)
	DE ✓	Chavrier, P. et al., "The complexity of the Rab and Rho GTP-binding protein subfamilies revealed by a PCR cloning approach", *Gene*, 112: 261-264 (1992)
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RS	DG ✓	Watson, J., Recombinant DNA, W.H. Freeman and Co., New York, 363, (1992)

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Richard Schwartzman	9/6/09

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RS	DH ✓	Ingham, P. et al., "Role of the Drosophila patched gene in positional signalling" , *Nature*, 353: 184-187 (1991)
	DI ✓	Hidalgo, A. and Ingham, P., "Cell patterning in the Drosophila segment: spatial regulation of the segment polarity gene patched" , *Development*, 110: 291-301 (1990)
	DJ ✓	Phillips, R. et al., "The Drosophila segment polarity gene patched is involved in a position signalling mechanism in imaginal discs", *Development*, 110: 105-114 (1990)
	DK ✓	Nakano, Y. et al., "A protein with several possible membrane-spanning domains encoded by the Drosophila segment polarity gene patched", *Nature*, 341: 508-513 (1989)
	DL ✓	Hooper, J. and Scott, M., "The Drosophila patched gene encodes a putative membrane protein required for segmental patterning" , *Cell*, 59: 751-765 (1989)
	DM ✓	Simcox, A. et al., "Imaginal discs can be recovered from culture embryos mutant for the segment-polarity genes engrailed, naked and patched but nor from wingless" , *Development*, 107: 715-722 (1989)
RS	DN ✓	Thummel, C. et al., "Vectors for Drosophila P-element mediated transformation and tissue culture transfection", *Gene*, 74: 445-446 (1988)
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